

# **PHYSICAL ASPECTS OF HEALTH IN FITNESS**

# COMPONENTS OF FITNESS

1. Cardiorespiratory/Cardiovascular  
Efficiency of heart and lungs
2. Muscular Strength  
Capacity of muscle or group of muscle to produce force.  
Resistance – body or weights
3. Muscular Endurance  
Ability of muscles to work for an extended period of time
4. Flexibility  
Ability to move a joint through a full range of motion
5. Body Composition  
Amount of fat tissue in your body compared to lean tissue (muscle)

# CARDIOVASCULAR

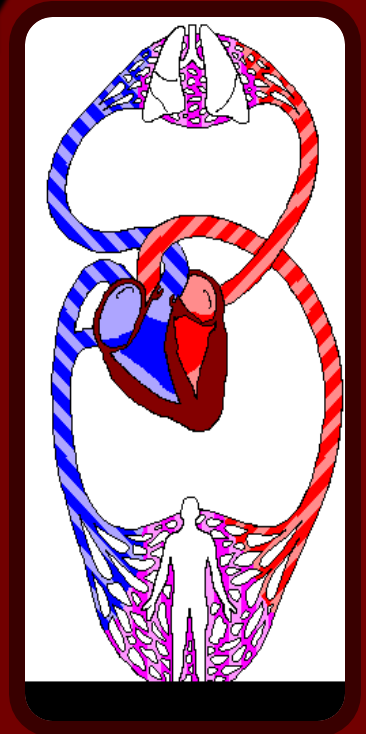
- **CARDIORESPIRATORY**

- **CARDIOPULMONARY**

**HEART AND LUNGS**

–CIRCULATORY SYSTEM

–RESPIRATORY SYSTEM





minolo

en-utilizes O<sub>2</sub> to produce energy

even, cons

gging, swimming, cycling, aerobic

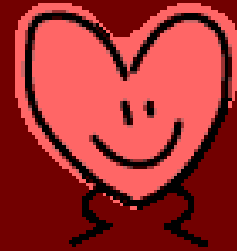
## ■ ANAEROBIC

Without oxygen-does not utilizes O<sub>2</sub> to produce energy. Go hard, then stop, etc.

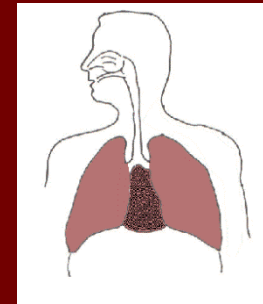
Examples: volleyball, softball, soccer, football weightlifting, team sports, etc.

# What are Immediate effects of a Cardio Workout?

1. Heart rate increases



2. Breathing increases



3. Body temperature increases



# TRAINING ZONE OR TARGET HEART RATE (THR) ZONE – What's yours?

**220(maximum *heart rate*) MINUS  
YOUR AGE times percentage of effort**

$$220 - 14 = 206 \times .60 \text{ TO } .80 =$$

**YOUR TARGET HEART RATE ZONE**

**LOW EFFORT**

$$220 - 14 = 206 \times .60 = 134$$

**BETTER EFFORT - Class Effort**

$$220 - 14 = 206 \times .80 = 165$$



Heart Rate Monitor used in class to  
measure THR zone

# F.I.T.T. PRINCIPLE

## Frequency

How often? 3 to 5 times per week

## Intensity

How hard? Effort increases heart rate

Rate for class activity?

150-180 b.p.m. (beats per minute)

## Time or Duration

How long? Minimum is 20-30 minutes at exercise heart rate (THR zone)

## Type of Exercise

What kind of activity? Aerobic/Anaerobic

# FOUR STRENGTH PROGRAMS

**1. Isometric**

**2. Isotonic**

**3. Isokinetic**

**4. Timed Calisthenics**

**Workout program that includes cardio and strength ( ex. jog/sprint for 2 min. 4 sets of 10 sec calisthenics or isometric with recovery in between sets)**



# ISOMETRIC:

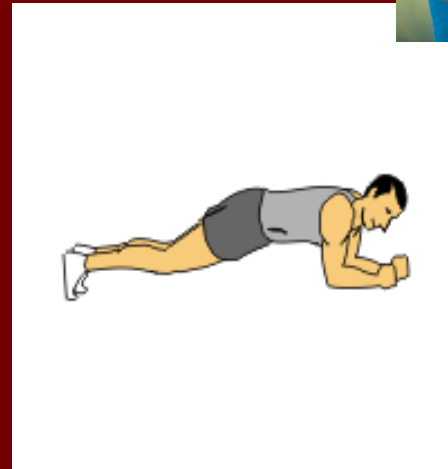
## ► Muscle contraction with little or no movement

### ◦ ADVANTAGES:

- Requires less equipment
- Less muscle soreness

### ◦ DISADVANTAGES:

- Strength is not developed through a full range of motion



# ISOTONIC:



- Muscle contraction with movement (relaxing and contracting) - Calisthenics

## – ADVANTAGES:

- Develop strength through a full range of motion
- Cosmetic effects (muscle tone)

## – DISADVANTAGES:

- Soreness
- Not as controlled in the speed of lifting



# ISOKINETIC:

## ► Muscle Contraction at a constant rate using weight machines

### ◦ ADVANTAGES:

- Strength is developed in a shorter amount of time (isotonic)
- Use full range of motion
- Speed of muscle contraction controlled
- Less muscle soreness

### ◦ DISADVANTAGES:

- Special equipment (Nautilus/Body Masters)
- Expensive – Gym cost
- Ego-hard to lift in front of others/intimidated

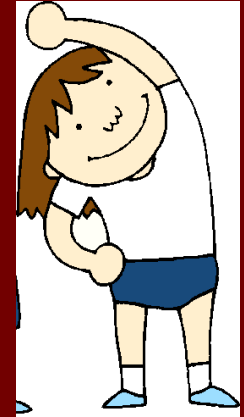
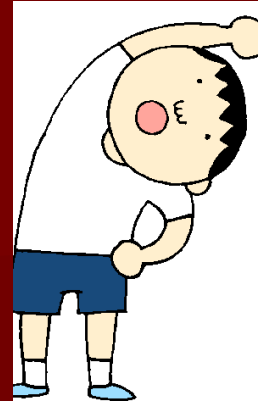


# OVERLOAD PRINCIPLE

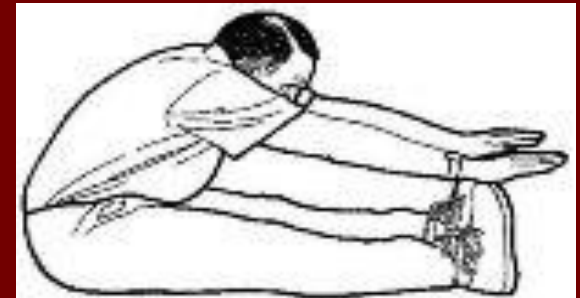
- To improve, you must increase the load (or the exertion) on the body. As the training progresses, so does the load.
  - a. Frequency
  - b. Intensity
  - c. Time (duration)
  - d. Type of Activity/Exercise



- Flexibility
  - The ability to move a body part through a full range of motion (ROM).



- Range of Motion
  - Distance through which a limb can travel at a given joint.





# TYPES OF STRETCHES

- Static Stretch:
  - Slow, sustained stretching
- Ballistic Stretch:
  - Fast, jerky, bouncy stretch
- Dynamic Stretch:
  - Active stretch. Type of stretching while moving



# Physical Benefits

1. Stronger muscles and bones
2. Maintaining weight and weight loss
3. Stamina
4. Heart rate decreases (lower resting heart rate – heart is more efficient and works less at rest)
5. Lower blood pressure
6. Increase energy and concentration
7. Reduce risk of illness

# Psychological Benefits

1. Reduce stress levels
2. Improved mood
3. Increase confidence
4. Achieve natural high - endorphins

# Social Benefits

1. Having fun/enjoyment
2. Bonding with family and friends
3. Build new relationships



# Work Cited

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